[While drilling system and method] Abstract

A while drilling system and method for determining downhole parameters is provided. The system includes a retrievable while drilling tool positionable in a downhole drilling tool, a sensor chassis and at least one sensor. The while drilling tool is positionable in the downhole drilling tool and has a first communication coupler at an end thereof. The sensor chassis is supported in the drilling tool. The sensor chassis has a second communication coupler at an end thereof for operative connection with the first communication coupler. The sensor is positioned in the chassis and is adapted to measure internal and/or external parameters of the drilling tool. The sensor is operatively connected to the while drilling tool via the communication coupler for communication therebetween. The sensor may be positioned in the while drilling tool and retrievable with the drilling tool. Preferably, the system is operable in high temperature and high pressure conditions.